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ABSTRACT

This paper examines the value of using cross-cultural studies for teaching critical thinking skills to college students. Critical thinking has been narrowly defined as an ability to think logically, abstractly, and objectively. Recently, however, a new model of critical thinking suggests the importance of adding multiple perspectives as a crucial component of critical thinking (K. Walter, 1994). Based on this new model, this essay discusses the use of cross-cultural studies as a pedagogical alternative for teaching critical thinking skills to college students. For the sake of argument, the paper uses an example of cross-cultural differences in medical decision making styles for cancer diagnosis in the United States and Japan. This example illustrates how medical decisions for cancer treatment are made differently in the two countries. To explain how the cross-cultural comparison of medical decision making styles can help students develop critical thinking skills, the seven dispositions of critical thinking proposed by P. Facione and N. Facione (1992) are used. (Contains 1 figure and 38 references.) (Author/SLD)

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The Use of Cross-Cultural Studies as A Way of Developing Critical Thinking Skills Among College Students

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Abstract

This paper examines the value of using cross-cultural studies for teaching critical thinking skills to college students. Critical thinking has been narrowly defined as an ability to think logically, abstractly, and objectively. Recently, however, a new model of critical thinking suggests the importance of adding multiple perspectivenss as a crucial composition of critical thinking (Walter, 1994). Based upon this new model, the author discusses the use of cross-cultural studies as a pedagogical alternative for teaching critical thinking skills to college students. For the sake of argument, this paper uses an example of cross-cultural differences in medical decision making styles for cancer diagnosis in the United States and Japan. This example illustrates how medical decisions for cancer are made differently in these two countries. To explain how the cross-cultural comparison of medical decision making styles can help students develop critical thinking skills, the seven dispositions of critical thinking proposed by Facione and Facione (1992) are used.

The Use of Cross-Cultural Studies as A Way of Developing Critical Thinking Skills Among College Students

Fostering students' critical thinking skills has been recognized as a central mission of higher education in the United States since early 1980s (National Institute of Education, 1984). The U.S. government - President Bush with the National Governors' Association - included the goal of increasing the number of college students with the ability to think effectively and solve problems as one component of the National Educational Goals (Halpern, 1993). Despite this national emphasis on the development of critical thinking skills in higher education, there is a paucity of studies on critical thinking. According to McMillan (1987), this is due to the lack of common definition of critical thinking and good measurement tools to assess this cognitive process. As a result, the research findings tend to vary in terms of the factors that contribute to the development of critical thinking skills.

Definitions. Although studies of critical thinking suffer from a lack of agreement on an operational definition of the construct, the most commonly employed definition includes the following components: (a) cognitive skills in identifying the gist of an argument, (b) identifying assumptions, (c) analyzing or interpreting information or data, (d) making inferences, (e) deducing conclusions, (f) evaluating the validity of an argument, and (g) synthesizing information (McMillan, 1987; Pascarella et al., 1996). The operational definition of critical thinking provided by Halpern (1993) adds mathematical and statistical thinking skills to the other commonly accepted dispositions of critical thinking. These include (a) understanding principles of likelihood and uncertainty, (b) reasoning about ratios, (c) generating hypotheses, and (d) recognizing regression to the mean.

Most recently, the Delphi Research project on critical thinking (American Philosophical Association cited in Facione et al., 1994) came up with a "cross-disciplinary" conceptual definition of critical thinking. In this definition, critical thinking was characterized as the process of self-regulatory judgment and reasoning that is both interactive and reflective (Facione et al., 1994). This new theoretical base of critical thinking appears to reflect an expanded paradigm of critical thinking (Walter, 1994), which I will explore further later.

Measurement. There are several different approaches to assessing critical thinking. Halpern (1993) listed such methods as student self-reports on thinking-skills, standardized IQ tests, Piagetian measures of cognitive development, comparisons of students' mental representations developed through different teaching techniques, specification of cognitive skills necessary for critical thinking, and measures of spontaneous transfer. So far, a number of standardized instruments are being developed to assess critical thinking. Naturally, items on each of these instruments reflect the test makers' theoretical interpretation of this cognitive process. Here, I will provide backgrounds for some of the major standardized instruments of critical thinking.

Among those instruments reflecting an orthodox paradigm of critical thinking, the most commonly used is the Watson-Glaser Critical Thinking Appraisal (CAT). In his review of 27 studies on critical thinking, McMillan (1987) found that 16 studies (59 percent) used this instrument as the dependent measure. The Watson-Glaser CAT has 80 objective items that test inferences, recognition of assumptions, deduction, interpretation, and evaluation of arguments in broad and general contexts. According to McMillan (1987), the Watson-Glaser CAT reveals technical limitations that would harm results of studies using this instrument. Several studies

criticized this instrument for (a) being on a technical basis, (b) having weak construct validity, (c) normalizing data, and (d) the use of "true" or "false" rather than "valid" or "invalid" for the assessment of inferences (Abo El-Nasser's and McPeck's studies as cited in McMillan, 1987). Mitchell (as cited in McMillan, 1987) claims that the scope and content of the Watson-Glaser CAT is narrow, containing neutral and controversial content that is difficult to identify.

The California Critical Thinking Disposition Inventory (CCTDI) is a recently developed measure for critical thinking (Facione & Facione,1992). The theoretical foundation of this instrument is the consensus definition of critical thinking based on the Delphi Report (Facione et al., 1994). It is a 75-item discipline- neutral instrument, testing for seven dispositions of critical thinking. They include 1) *inquisitiveness*, which measures one's intellectual curiosity and desire for learning, 2) *systematicity*, a subscale that measures the tendency toward organized, orderly, focused, and diligent inquiry; 3) the *analyticity* subscale, which measures one's reasoning and problem solving skills, 4) *truth-seeking*, which is a disposition that indicates how eager one is in seeking the best knowledge in a given context, 5) *open-mindedness*, which assesses the extent to which one is tolerant of divergent views with the awareness of the possibility of one's own bias; 6) the *CT (critical thinking) self-confidence* subscale for measuring how much trust one places in one's own reasoning processes; and finally, 7) the *maturity* subscale that assesses the extent to which one is cautious about making a decision. Theoretical basis for the CCTDI is more inclusive than those of the Watson-Glaser CAT, emphasizing abilities to engage in multiple-perspective thinking in addition to logical thinking.

Research. So far, many studies on critical thinking have employed longitudinal study designs, that typically last one year. In a comparison of freshman college students versus their

non-college counterparts. Pascarella (1989) compared matched groups of students on changes in critical thinking over a 1-year period. He found a modest positive influence of college experience on the development of critical thinking. From these findings, Pascarella concluded that intellectual or cognitive development in college occurs not because of specific isolated experience such as a particular academic course that students take, but because of the result of the integrated total experience of college life. This argument of Pascarella supports Astin's (1984) theory of "student involvement," in which he argues that students' total involvement in the college experience, including students' residence, types of jobs, "fit" between students and the college, academic involvement, student-faculty interaction, extracurricular activities, and involvement in student government, determine their academic success and development.

Recently, Pascarella, Bohr, Nora, and Terenzini (1996) again found a similar pattern that supports Astin's (1984) theory in their study comparing full-time versus part-time students in both four-year and two-year colleges. They found that full-time students at both types of schools achieved greater levels of critical thinking during the first year of college than students who were only enrolled part-time. In other words, the greater the student's involvement with college life, the greater his/her development of critical thinking skills.

Bers, McGowan, and Rubin (1996) studied critical thinking among community college students by using the CCTDI. Due to the nature of the dispositions emphasized in this particular instrument, their study yielded interesting results. They found an interaction effect for both age and gender. Female students were more likely to incorporate new knowledge into existing knowledge, while male students were more likely to challenge new knowledge instead of synthesizing it with existing knowledge. They claimed that this finding supported the assertion by

Belenky, Clinchy, Godberger, and Tarule (1986) that females had a "connected way of knowing" and males had a "separate way of knowing." Female students were also found to be more tolerant of ambiguity or conflicting opinions and possessed greater levels of truth-seeking, open-mindedness, and maturity than men. As far as the effect of age is concerned, they found that older students think more critically in all of the subscales than younger students, except "open-mindedness." The researchers discussed that this finding supported the assertion of Kitchner and King (as cited in Bers et al., 1996), who argued that the ability to think critically was a function of the normal process of cognitive development and age.

Due to the nature of research designs that typically involve longitudinal study methods and comparisons of selected groups, research of critical thinking always seems to suffer from problems of "maturation" and "selection." Despite the methodological limitations as well as problems with the definition of terminology and instrumentation, findings from these studies on critical thinking have been more or less consistent in terms of the effects found for college education on the development of students' critical thinking ability (McMillan, 1987; Pascarella, 1989; Bers et al., 1996; Pascarella et al., 1996). The overall college effects on critical thinking are positive. In other words, college students develop more critical thinking skills than their non-college counterparts. Also, students who are more involved with the college experience develop higher critical thinking skills than those who are less involved.

In a series of studies conducted by Pascarella (Pascarella, 1989; Pascarella, et al. 1996), this phenomenon persisted even after controlling certain variables such as selectivity of institutions, different levels of academic aptitude, pre-college critical thinking level, high school grades, educational aspirations, socioeconomic status, academic motivation, gender, race, age,

work responsibilities, and types of courses taken during the test period. As discussed earlier, studies by Pascarella (1989) and Pascarella et al. (1996) found no effect for the demographic background of subjects on critical thinking skills. In the meanwhile, Bers et al. (1996) found an interaction between gender and age with the development of critical thinking. The differences in these findings appear to be due to the differences in theoretical orientations of various instruments used for these studies. The Watson-Glaser CTA and the Collegiate Assessment of Academic Proficiency (CAAP) (in Pescarella's studies) and the CCTDI (in the study by Bers et al.) are the products of two different theoretical paradigms of critical thinking. It seems that one type of measurement tool (e.g., the CCTDI) is more sensitive to demographic characteristics of subjects than the other (e.g., the Watson-Glaser CTA and the CAAP), resulting from the different ways in defining the construct of critical thinking between the two. In the following section, I will discuss these differences among the models.

Two Models of Critical Thinking

According to Walter (1994), there are two different models of critical thinking. These two models differ from each other regarding the theorist's beliefs about what constitutes good thinking. The first model is so called a "logicistic model," which has been around since the 1940's and is regarded as an orthodox model. Walter defines the word *logicism* as "the unwarranted assumption that good thinking is reducible to logical thinking" (p.1). The emphases in this model include the cognitive abilities to distinguish between justified and unjustified claims or beliefs by using the rules and techniques of formal and informal logic. The assumption of this approach is that there is always only one right answer or truth and a good thinker is able to detect this right answer by applying the rules and techniques of logic to propositional expressions.

Walter (1994) criticizes this first model due to its three assumptions of *universality*, *objectivity*, and *abstraction*. The following is an elaboration of what these assumptions are and their limitations as pointed out by Walter.

Universality refers to the totalization of a methodology. This is an assumption that there is only one method with a set of evaluative criteria for any legitimate investigation (Walter, 1994). In other words, good thinking is practiced only through the mode and technique of logical thinking. Walter criticizes logicism's tendency toward totalization for encouraging a cognitive style that creates an unreasonably aggressive or adversarial spirit. That is to say, people tend to become adversarial in order to defend their own logic, assuming that there is only one truth or right answer in this world. He argues that this totalization also excludes other forms of cognitive styles such as creative imagination, intuition, and insight. Ambiguity cannot be tolerated by this mode of thinking. In reality, however, things are not always straightforward. Thus, too much emphasis on logicism in critical thinking causes a breakdown in the analysis.

Another assumption of a logicistic model is its objectivity, which has been a longstanding component of the Western philosophy. This condition promotes a belief that an analysis should be conducted without biases and that no personal value should be attached to it. Good thinking is, therefore, assumed to be anonymous thinking. Walter criticizes this assumption of logicism. He believes that total objectivity in thinking is unrealistic since thinking is always performed by a subject who has unique personal views and experiences. Instead, he argues that subjectivity of the thinker can actually enrich his thinking process. In real world situations, it is impossible for us to choose one answer between two or more arguments. The choice of answer also depends on who we are choosing for (i.e., ourself or others) and the impact that our choices will have. Objectivity

may be maintained only when we are completely unrelated to the issue or have no interest in the issue.

The final assumption of a logicistic approach to critical thinking is abstraction. This condition assumes that good thinking has to remove the object of thought from its context. Walter (1994) criticizes this "decontextualization" of thinking by stating that "all thinking is performed in concrete situations by concrete individuals, and to abstract from either of these two settings is to risk missing the overall meaning, purpose, and nuances of a claim or argument" (p.16). According to Missimer (cited in Walter, 1994), good thinking is a "social artifact" and is embedded in a community of inquirers. Therefore, arguments and claims need to be examined within the particular context. Decontextualized and abstracting thinking ignores the central role of thinking, which is a "quest for meaning" (Warren, cited in Walter, 1994). Walter explains that self-examination and the search for meaning are necessary for individual well-being and honesty. However, these self-reflective cognitive activities are discouraged in the conventional models of critical thinking due to their emphasis on decontextualization.

Attempts by the supporters of the new model of critical thinking have been made to overcome the shortcomings of the conventional model and to aim at developing a more valid pedagogy of critical thinking skills. Walter (1994) claims that the new theory needs to build a more "inclusive model that recognizes the multifunctionality, contexuality, and emancipatory nature of good thinking" and that a pedagogical approach needs to be "capable of incorporating second wave insights into existing critical thinking classes" (p.19).

The new model of critical thinking, which Walter (1994) refers as "second wave critical thinking" (Walter, 1994), does not deny the functional importance of logical thinking. However,

it denies the three assumptions of logicism in critical thinking. The new critical thinking model emphasizes the importance of multiple-perspectives, subjectivity, and considerations for contexts. This new approach to critical thinking aims the goal where both the theory and resulting pedagogy become richer and multidimensional. This multidimensionality of good thinking has also been emphasized by other critical thinking scholars (Paul, 1990; Lipman, 1991; Paul, 1994). They argue that good thinking consists of both logical thinking and creative thinking, and it has to be sensitive to the context in which this cognitive activity occurs.

From a point of view of the new critical thinking model, the following cognitive process should occur when engaging in critical thinking. First we should utilize intuitive and creative thinking by carefully and logically assessing and evaluating our own process of thinking. Then we should make a sound decision or develop solutions for problems with criteria that are relevant to the particular context.

How Can We Teach Students Critical Thinking Skills?

Despite the lack of consistency in definitions of critical thinking, no one would argue against the importance of fostering critical thinking skills among students. However, when it comes to the question of whether we can teach critical thinking skills to students or what sort of curriculum and teaching techniques can enhance students' critical thinking skills, opinions diverge. First of all, answers for these questions seem to be dependent upon whether we approach critical thinking as a domain-specific or a domain-general activity (McMillan, 1987; Paul, 1990; Gardner & Johnson, 1996; McCarthy, 1996). Although leading a conclusion as to whether critical thinking is a domain-specific or domain-general activity is beyond scope of this paper, I will briefly discuss this debate.

Paul (1990) rejects McPeck's (1981) claim that critical thinking is a subject-specific skill. Paul (1990) argues that what is necessary is not the specialized knowledge and skills that McPeck assumed to be necessary for the development of critical thinking, but a combination of understanding basic concepts and principles in a discipline, experience in thinking, and the ability to learn new details and assess relevant details in order to understand the problem. Paul (1990) continues by saying that adequate background knowledge and skills for gathering and analyzing information and insight in a relevant discipline are enough for addressing a question or problem (p. 413). Gardner and Johnson (1996), on the other hand, support McPeck's stance and criticize Quinn's (as cited in Gardner & Johnson, 1996) assertion who shares a similar approach with Paul that critical thinking is not a subject-specific skill. Gardner and Johnson claim that determining truth is a domain-specific activity and thus considerable knowledge of a specific domain is required for critical thinking.

I adopt an approach that is similar to those held by Paul and Quinn who believe that critical thinking is a domain-general skill. As was discussed by Walter (1994), thinking is always performed by a subject, so critical thinking cannot be completely objective. This is always the case no matter in what domain of inquiry we are operating. As a result, an ontological question as "Is there such a thing as an absolute truth in this world?" becomes quite valid due to the inevitable involvement of subjectivity in our thinking. Different truths may exist as many different thinkers there are. Fosnot (1996) argued that knowledge and mind cannot be separated since both are being developed from an interaction between the human being and the world around him (p. 25). That is to say, thinking cannot be separated from the thinker and the context. This view of knowledge held by constructivists may lead to questions such as "What do Gardner and

Johnson mean by determining 'truth'?" Therefore, I would argue that the purpose of developing critical thinking is not for determining one truth, but for developing legitimate processes or approaches for knowledge inquiry.

Paul (1994) stresses that teaching critical thinking should not be a goal for one course, but that it should be a way of teaching any course or subject, and eventually should be a way of teaching how to think and live in the everyday world (p. 194). It seems to me that the answer to the debate of critical thinking as a domain-specific versus domain-general activity lies in whether one focuses on ontology or epistemology. In other words, if we believe critical thinking is a goal for how we know instead of what we know, it can be interpreted as a transferable skill across different domains. Since I believe that critical thinking is not an outcome, but rather a process of knowledge inquiry, I support the idea that it is a domain-general skill.

In the following section, I will propose some suggestions for a pedagogical alternative specific to the recent new model of critical thinking that emphasizes *multiple-perspectives* and considerations for *contexts* (Walter, 1994). This pedagogical approach assumes that critical thinking is a domain-general activity and thus this is considered to be a discipline neutral framework.

The Use of Cross-Cultural Studies as Pedagogy of Critical Thinking

The use of cross-cultural studies is one form of a pedagogical approach to developing college students' critical thinking defined by the recent new model (Walter, 1994). Cross-cultural studies enable students to recognize with clear examples that the context is an important precondition for our thinking and that there are multiple perspectives due to contextual differences. Through cross-cultural studies, students may become able to understand and

integrate the constructivists' notion of "knowing." They will learn that meanings and understandings (knowledge) is something that one "constructs" within the given context through communication with others in the community by using shared symbols such as a natural language (D'Andrade, 1990: p.65). The goal of this type of pedagogy is to help students become aware of cultural influences on individual's cognition and to eventually integrate this awareness of multiple perspectives into their own thinking. Once students integrate these cognitive skills, they should be able to apply them to new learning with careful considerations for contexts.

A similar approach, though not identical, has been suggested by Paul (1994). He stresses the importance of having multiple points of view, frames of reference, and worldviews when engaging in critical thinking. According to Paul, this approach is especially effective for the development of reasoning skills when dealing with areas where students tend to have egocentric and sociocentric biases (p.190). Topics suggested by Paul for teaching critical thinking include multidimensional political, social, and personal issues (e.g., abortion, nuclear energy, nuclear arms, poverty, social injustices of various kinds). Although my approach employs cross-cultural investigations as a major tool for the development of critical thinking skills, the emphases on multiple-perspectives and context-sensitivity in critical thinking are similar to those suggested by Paul.

Cross-cultural study, in general, deals with investigations of cultural influences on human cognition and behavior. Typically at universities a course is offered out of the psychology department with the title "Cross-Cultural Psychology" (Brislin, 1993). However, in this discussion, I do not intend to limit this cross-cultural study to the discipline of psychology. It can be applied to comparative studies of many other disciplines, including other social science,

technology science, natural science, humanities, and professional disciplines such as business, medicine, law, nursing, and public health. Examples of these include, but are not limited to, the investigation of cultural influence on human cognition and behaviors, comparisons of social systems (political, economic, welfare and educational systems) in different countries, gender differences in psychology, cultural influence on technologies, comparative literatures across cultures, cultural influence on business practices and management or leadership styles, cultural influence on bioethics, comparative laws, cultural influence on nursing practices, and comparisons of public health policies in different countries.

Although the word "culture" is typically perceived in relation to ethnicity, race or nationality, by "culturally different views" I mean the differences due to variables such as age, gender, race, ethnicity, nationality, socioeconomic status, geography, ecology, life styles, and so on. As a result, I define "cross-cultural study" as the investigation of comparisons of more than two views or perspectives about a certain universal concept (e.g., child-rearing practices, roles of government, roles of school). Universal concepts are often referred to as "etic," which are concepts or ideas that are common across cultures. "Emic" refers to cultural-specific concepts that are only found in a specific culture or society (Brislin, 1993, p. 73). The key point in enhancing critical thinking skills among students is to provide them with both etic and emic concepts. In other words, every time we provide the students with a new concept, we also provide different views and approaches to the same concept in other cultures. Then we encourage students to think about reasons for the similarities and the differences about the concept across cultures. Students should also be asked to carefully analyze whether the manifested differences are due to cultural differences or some other factors (e.g., institutional

differences).

Applying the CCTDI Dispositions to A Cross-Cultural Study. Why do I believe that the use of cross-cultural study may enhance critical thinking skills among college students? There are various reasons supporting this belief. I will discuss these reasons by connecting them with the seven dispositions of critical thinking from the California Critical Thinking Disposition Inventory (Facione & Facione, 1992). The reason for using dispositions of the CCTDI is their multiple-perspective and contexual approaches to critical thinking. The items of the CCTDI reflect the recently increasing demands for individuals to be fair-minded problem solvers and thinkers (Facione, Facione, and Giancarlo, 1996). Facione et al. (1992, 1994, 1996) believe that defining the construct narrowly as abilities to think logically is not comprehensive since critical thinking is a complex and multidimensional cognitive activity. They believe that abilities to make decisions and judgment as well as to solve problems from a multiple point of views by considering the particular context are fundamental facets of critical thinking.

In this discussion I will use an example of a cross-cultural comparison of medical decision making for terminal cancer patients in Japan and the United States (Kakai, 1997). This example illustrates how one universal concept or etic (e.g., medical decisions for terminal cancer) can be handled very differently in two different cultural contexts. This example is also ideal in terms of managing the issue of equivalence in cross-cultural studies. For studies to be valid, the countries or subjects to be compared in cross-cultural studies should always be equivalent. In this sense, the comparison between Japan and the United States is convenient since these two countries are culturally very different and yet very similar in terms of levels of technological and economical development.

The first disposition in the CCTDI is *inquisitiveness*, which refers to the student's intellectual curiosity and desire for learning. As Piaget emphasized, learning occurs when there is cognitive conflict or disequilibrium. Cognitive conflict motivates people to learn and promote changes in their cognition (Pressley with McCormick, 1995). Therefore, if people are presented with something unexpected or surprising, which does not fit with their already existing schemas, they are more likely to have a desire for learning. They can be motivated to learn more about such information than information that is very familiar and not especially noteworthy to them.

A cross-cultural study offers a valuable experience to learners because they will be exposed to completely new perspectives about a familiar concept. For example, if I tell American students that the majority of terminal cancer patients in Japan are not informed of their diagnosis by doctors, their reactions will most likely generate many questions such as "What do doctors tell the patient, then?" "What about malpractice lawsuits?" "How do doctors give treatment to the patient if they don't tell the truth?" Since it is mandated by law that every patient who is cognitively competent has to be informed of his/her true diagnosis by the doctor in the United States, American students who only know about this way of making a medical decision may be struck by the Japanese way of handling cancer diagnosis. Giving students unanticipated information invites a lot of questions from them, which should generate valuable discussions and active participation in learning.

A good cross-cultural study cannot be done without having *systematicity*. Facione and Facione (1992) define this disposition as the tendency toward organized, orderly, focused and diligent inquiry. Organizing differences and similarities of a concept across cultures requires students' abilities to organize information, have an appropriate focus, and diligently pursue the

inquiry. Using the previous example, students would find both cultural and institutional factors playing a role in the manifested differences in medical decision making in Japan and the United States. In the United States, values such as "individualism" and "self-determination" are respected and thus create an environment where cancer patients are informed of the truth by the doctor and can make their own medical decisions for choosing a certain treatment option. On the other hand, Japanese people value "collectivism" and "interdependence," creating an environment where family members of the cancer patient are informed of the patient's diagnosis and collectively make a medical decision for the patient.

By just looking at these factors, one may conclude that it is "culture" that creates variability in these two different ways of making a medical decision. However, further examination will uncover another important factor, the institutional factor, that contributes to this variability. Even in the United States, a terminal cancer diagnosis was not generally disclosed to the patient prior to the 1970s. It was after the Patient's Bill of Rights (1973) that it became a common practice for physicians to inform their patients of the true diagnosis, available treatment options, risks and benefits for each treatment option, and prognosis, and to obtain consent for the medical intervention from the patient (i.e., medical informed consent). This bill emerged from the background of increasing numbers of malpractice lawsuits as well as the gaining power of the Consumerism Movement in the 1960s (Novack, Plumer, Smith, Ochitill, Morrow, & Bennett, 1979). Later on, the Patient's Self-Determination Act (1991) was enacted and the disclosure of a diagnosis and informing the patient of "no treatment" as an available choice became a legal mandate.

In Japan, there is no equivalent law that enforces the disclosure of the true terminal cancer

diagnosis to the patient. For one reason the Japanese cultural value in harmony discourages people to utilize lawsuits as a solution for problem settlement, resulting in small concern for malpractice lawsuits involving medical informed consent. Also, strong Japanese medical paternalism (Feldman, 1985; Long & Long, 1992; Tanida, 1994) allows doctors to have enormous power over the patient and his/her family, but at the same time allows the patient and his/her family members to defer to the doctor for the important decision making. Additionally, many Japanese doctors are unable to spend adequate time with each patient due to the universal health insurance system, according to which everybody has an access to medical services (I. Sasagawa, personal communication, April 11, 1996). As a result, there is not sufficient time for doctors to sit down with each patient and go through the process of informed consent until the patient fully understands his/her diagnosis and treatment options before making a medical decision.

Medical payment systems in the two countries are also set up differently. In the United States, the Diagnosis-Related Group (DRG) payment system is used. This system was designed to aim at cost-effective hospital management by regulating length of hospitalization, available treatments and drugs for patients based upon their diagnostic codes (Latta & Helbing, 1991). On the other hand, the medical payment system of Japanese hospitals has been based upon a "Fee-for-Service System," where there is no regulation for medical expenses according to diagnostic codes. With this payment system, the more treatments and drugs hospitals provide, the more they can make profits (Ikegami, 1991). As a result of these different medical payment systems, hospitals in the United States and Japan may have developed different attitudes toward the duration of medical services for patients, which may be affecting the urgency of obtaining informed consent

from patients for treatment by notifying them of accurate information about their diagnoses.

The complexity of this example demonstrates that careful organization and inquiry of the information prevents students from jumping into a simplistic conclusion that would attribute all observable differences to culture. Through this patient inquiry, students become cognizant of institutional factors such as a law and national systems that can play an equally important role as culture.

Analyticity is the third disposition of the CCTDI and it refers to cognitive abilities that allow people to connect their theoretical knowledge base to practical application. People who are high on this disposition are alert to potential difficulties and aware of the need to intervene. The students who have learned about the American emphasis on individualism and the Japanese emphasis on collectivism may be able to find similar patterns in other areas such as child-rearing practices, educational systems, corporate culture, political and economic systems, welfare systems in these countries. The students may also become capable of discovering the intricate relationship of culture and institutional factors in other contexts. In this particular example of medical decision making, student with health-related majors (medicine, nursing, public health, social work, etc.) may be able to apply cultural knowledge that they have gained in class to their practice. These students may be able to exercise their critical thinking skills when dealing with actual cancer patients with cultural values similar to those held by Japanese (e.g. Japanese-American elders or other Asian elders).

The forth disposition of critical thinking in the CCTDI is *truth-seeking*. The definition of this disposition is one's desire to seek the best knowledge in a given context, courage to ask questions, and honesty and objectivenss about pursuing inquiry even if the findings do not support

one's self-interests or one's preconceived opinions (Facione & Facione, 1992). The more students are exposed to a broad range of views and perspectives, the greater the chance they will become eager to seek best knowledge in a given context by asking questions and pursuing inquiry. The truth-seeking disposition of critical thinking may be thus increased. The students who have been exposed to the cultural variability in ways of making medical decisions for terminal cancer patients in Japan and the Untied States may come to think of such questions as "What about the case of this country or that country?" and "Does the patient's age or gender make any difference in ways of making medical decision making?" "Which way of medical decision making is truly beneficial for patients themselves?" Students may become eager to find out about many aspects of medical decision-making. Again, a cross-cultural study seems to encourage the development of an important disposition for critical thinking.

The development of *open-mindedness* may be the disposition that would benefit most from cross-cultural studies. This disposition refers to one's tolerance of divergent views with sensitivity to the possibility of his/her own bias (Facione & Facione, 1992). According to Brislin (1993), when people become more complex in their thinking, they refuse to stereotype and develop more appreciation for divergent views or cultures. People become aware of their own biases when they encounter views and perspectives represented by people from different cultures. The more people learn about different cultural perspectives, the more they become able to value and accept the views of others rather than thinking them as inferior or trying to imposing their own belief system on others. Such beliefs as "Our way is the only way" or "Our way is always right and their way is always wrong" can be restructured. Through cross-cultural studies, people may become more cautious about their own biases. In the case of medical decision making,

students may realize that the American way of medical decision making is not the only way and that it merely reflects the social context of American society.

Numerous experiences in cross-cultural studies may give students a sense of *self-confidence* about their own judgment and problem conceptualization. Facione and Facione (1992) define this sixth disposition of critical thinking as the trust in one's own reasoning processes or the soundness of one's judgments that lead others in the resolution of problems. After conducting careful analysis of cross-cultural differences, students would rarely go back to their previous judgmental thinking. They may always remind themselves that what they know may not be true in another cultures. However, it is possible that students will lose some self-confidence about their judgment in the beginning. It is easier for people who only know one viewpoint to feel confident about their ways of thinking because they are not aware of the existence of diverse views. As students expose themselves more to culturally diverse views of the world, they may become more comfortable with and get used to accepting multiple perspectives. They will learn to think more flexibly by considering the importance of a context when making a judgment. Eventually, they will be able to trust their own reasoning processes that sustain flexibility in their thinking and recognition of their own biases.

The more perspectives students become aware of through cross-cultural studies, the more they may develop *maturity* in their own decision making. Maturity is "the judiciousness" in one's own decision making with an awareness that some problems are ill-structured and thus yield to several plausible options (Facione & Facione, 1992). Students' multiple-perspective thinking developed through cross-cultural studies may help them to think in a more complex manner. Returning to the example of medical decision making for cancer treatment in Japan and the

United States, students may realize that there are multiple definitions of what an "ethical doctor" is. Cross-cultural differences in the concept of "bioethics" create the variability in medical decision making in Japan and the United States. In Japan, ethical doctors are expected to conceal terminal cancer diagnosis from the patient, while Americans believe that informing patients of the true diagnosis is what ethical doctors should do. In a multicultural society such as the United States, ethical decision making for terminal patients becomes very complex and difficult when patients have culturally diverse beliefs about life and death. A medical professional has to deal with patients in order to accommodate their different beliefs on the one hand, and comply with the mainstream law and policy on the other hand. In such a case, one truly needs sound judgments to choose the best option in decision-making or problem-solving, considering the context of each patient's background. Consequently, brainstorming among students about what they would do if they were medical professionals helping ethnic elderly patients with unique cultural beliefs will help them increase the maturity disposition of critical thinking.

Finally, although the CCTDI does not have a particular disposition that assesses the *creativity* of students, I want to add this important quality of critical thinking in my discussion (Paul, 1990; Lipman, 1991; Walter, 1994). The creativity of students can be assessed according to the extent to which their minds are flexible for developing or inventing different ideas and new perspectives. In cross-cultural studies, one example of this creative mind is the concept of "cultural synergy" (Adler, 1997). Cultural synergy is defined as "maximizing the potential advantages by managing the impacts of diversity, rather than by ignoring them (Adler, 1997). According to Adler, commonly held approaches to managing cultural diversity assume *homogeneity* of people. This perspective considers all people to be basically the same and takes the "melting pot" approach. By contrast, cultural synergy assumes *heterogeneity* of people. This

has a belief that people are not all the same and that each groups maintains its cultural distinctness. This approach equally value the importance of similarities and differences. Cultural synergy, Adler claims, assumes *equifinality*, which is a belief that no culture's way of living, working, and reaching a final goal, is inherently superior (p. 107).

Combining strengths of systems in each culture to create a better system is a good way to solve a problem. Knowledge is usually developed and accumulated through years of historical experiences of people in the community. However, cultural synergy may enable us to skip some of the knowledge accumulation processes and allow us to take a short-cut to developing better systems. It is possible because of the nature of cultural synergy. Cultural synergy allows us to borrow beneficial ideas from other cultures and combine them with our already existing knowledge to improve what we already know.

Returning to the medical decision-making example again, the recently emerged concept of "explanation and consent" in Japan may be a good example. This "explanation and consent" is a Japanese version of American "informed consent" practice, where a doctor is allowed to manipulate the extent to which he/she provides information to the patient. This is different from conventional ways of dealing with informed consent for cancer diagnosis in Japan, which is to conceal the truth from the patients by giving them a fake-curable diagnosis such as an "ulcer" to stomach-cancer patients (Long & Long, 1982). With the new "explanation and consent" policy, a doctor neither lies to the patient nor provides him/her 100 percent of the information. Instead, a doctor discloses the true diagnosis to the patient by holding back some of the information which he/she anticipates having negative psychological impacts on the patient. This unique mode of informed consent has been developed by Japanese who believe that American ways of informed consent are just not compatible in the Japanese social context. Since Japan has different

traditional values, beliefs, and medical systems from the United States, merely importing American systems does not work in Japan (Tanida, 1994, Abe, 1989, Kato, 1989). In this sense, Japanese "explanation and consent" is a product of cultural synergy where Japanese invented something new by combining ideas that they borrowed from Americans with their own values and beliefs.

Figure 1 is about here

Dual Approaches to Critical Thinking Development

The use of cross-cultural studies is good way to enhance college students' critical thinking skills. It is also easy to implement in the classroom. The main task of the instructor is to provide more than one worldview or perspective about the concepts that they teach. However, in reality, it may be difficult for the instructor to provide enough opportunities for students to think about and analyze cross-cultural differences in particular topics related to the course subject due to the substantial amount of information to be covered during one semester. Therefore, if the institution is truly committed to students' development of critical thinking, it may be more realistic to offer classes specifically targeted for this purpose. This is because I believe that the effect of cross-cultural studies becomes maximized when students focus on only one or two topics that they are truly interested in and conduct cross-cultural analysis on these selected topics throughout the semester. In this sense I agree with Paul (1994) who discusses that covering only a few issues

deeply and intensively is the most advantageous for teaching critical thinking

Here, I would also like to suggest the role of other activities for enhancing students' critical thinking skills. One example is students' international experiences through traveling abroad and international programs such as study abroad, international internships, and the Peace Corps. There have been several studies assessing the impact of education abroad (Laubscher, 1994). Results of these studies are diverse. Some researchers reported significant impacts of study abroad on students' positive attitudinal changes while others found no such results. Among those studies where significant positive impacts of study abroad were reported, some researchers found that students who experienced study abroad became more "worldminded," develop a greater "sense of autonomy" and "self-esteem," and became more "sympathetic toward different ethnic groups" (Rose, Nash, Gwynee, and Pyle, cited in Laubscher, 1994). Others reported that participants of study abroad programs greatly increased "concerns in international politics," "cross-cultural interests," and "cultural cosmopolitanism" (Carlson & Widaman, cited in Laubscher, 1994). All of these positive changes are necessary dispositions possessed by critical thinkers. Therefore, extra-curricular programs that provide students with opportunities for international experiences may be beneficial for the development of critical thinking skills

Having real and intensive interactions with people who are from different cultures would deepen students understanding of cultural relativity much more quickly and effectively than analyzing cross-cultural differences in classroom. This is because the effect of cross-cultural studies in the classroom tends to remain within the cognitive domain of students' development, while that of participation in intercultural educational programs tends to foster changes not only in the students' cognition, but also in their emotions and behavior (Brislin, 1993). In this sense, interacting with people on an individual level seems very important for further enhancing the

critical thinking skills of students. This will help students develop a more profound understanding of the reasons behind the cultural variability which is manifested in people's cognition, emotions, and behavior, as well as cultural artifacts (e.g., social institutions and systems) created by these people.

Consequently, I believe it is very important for universities to provide various international or intercultural opportunities for students. This type of dual approaches involving the development of curricula and extra-curricular activities may be the most effective way to foster critical thinking skills among college students. If Astin's theory of students' involvement (1982) is applicable in this context, one could argue that more involvement of students with cross-cultural studies and intercultural experiences may foster a more thorough development of their critical thinking skills.

Conclusion

Critical thinking skills are important abilities that students should develop throughout their school lives. Developing students' critical thinking skills are especially emphasized in higher education. Although abilities to think logically, abstractly, and objectively have been traditionally emphasized as dispositions of critical thinking, the recently expanded new paradigm of critical thinking highlights the importance of abilities to think with contexts and from multiple perspectives. This new model of critical thinking also includes the importance of creativity and intuitions in a problem solving domain of critical thinking. In this paper, I have proposed the use of cross-cultural studies for developing critical thinking skills among students through broadening their perspectives about concepts. Expanding one's own views and being aware of one's own egocentric or ethnocentric biases are especially crucial for the survival of our rapidly shrinking global community.

In *International Relations In A Changing Global System* (1992), Brown asserted that the world is no longer able to exist without global collaboration. Active interactions among nations are a must for the survival of the human species. This is because nations of the world are already interdependent and will continue to be this way through political relations, activities of international corporations, international collaboration to cope with such global issues as ecological threats, health problems, vast economic disparity among nations, and human rights issues. Therefore, Brown (1992) argues, what we need now is a "theory of the world polity" that assumes international collaboration, as distinct from conventional theories of international politics or international relations that assume nation-state sovereignty (p. 1).

Given that the necessity for global collaboration is a world trend that we are now facing, what do we as educators have to do in order to prepare our students for this new shift in thinking? This trend of thinking is well reflected in Bowman's (1996) "Six Aims" for future classrooms. One of his six aims is especially relevant for this discussion, where Bowman emphasizes the goal of developing understanding and experiencing global interdependence. He asserted that "educators need to develop rich opportunities for youth to confront, and cope with, the demands of global interdependence by immersing students in a diversity of thought, values, beliefs, and cultures" (Bowman, cited in Bowman, 1996). He also referred to Gardner (as cited in Bowman, 1996) who recognized that the experiences of traveling abroad in one's youth is an early indication of effective leadership. As a result, it is clear that future trends will, more than ever before, demand students to develop thinking skills with much broader perspectives. Therefore, I believe no matter what method is taken (e.g., cross-cultural studies in the classroom or participation in study abroad programs), students need to develop, for the survival of our human species, the kinds of critical thinking skills defined by the second wave critical thinking theorists (Walter, 1994). Higher

education should be responsible for producing future leaders who are capable of making a sound judgment, solving problems effectively, and making the best decision, from multiple perspectives

References

Abe, M. (1989). Ishi no tachiba kara mita setsumei to doi ["Setsumei to doi" or informed consent from a doctor's point of view]. Report presented at the Bioethics Council of the Japanese Medical Association on issues of "setsumei to doi". Nippon Ishikai Zasshi, 102 (2), 169-178. (In Japanese)

Adler, N. J. (1997). International dimensions of organizational behavior. Cincinnati, OH: South-Western College Publishing.

Astin, A. (1984). Student involvement: A developmental theory for higher education. Journal of College Student Personnel, 25, 297-308.

Belenky, M. B., Clinchy, B. McV., Goldberger, N. R., and Tarule, J. B. (1986). Women's ways of knowing. N.Y.: Basic Books.

Bers, T. H., McGowan, M., & Rubin, A. (1996). The disposition to think critically among community college students: The California Thinking Disposition Inventory. The Journal of General Education, 45 (3), 197-223.

Bowman Jr., R. F. (1996). Revisiting tomorrow's classrooms. The Educational Forum, Summer, 304-307.

Brislin, R. (1993). Understanding culture's influence on behavior. Fort Worth, TX: Harcourt Brace.

Brislin, R. & Yoshida, T. (1994a). Intercultural communication training: An introduction. Thousand Oaks, CA: Sage Publications, Inc.

Brislin, R. & Yoshida, T. (1994b). Improving intercultural interactions: Modules for cross-cultural training programs. Thousand Oaks, CA: Sage Publications, Inc.

Brown, S (1992) International relations in a changing global system Toward a theory of the world polity Boulder, Colorado Westview Press, Inc

D'Andrade, R (1990) Some propositions about the relationship between culture and human cognition In J W Stigler, R A Shweder, & G Herdt (Eds), Cultural psychology Essays on comparative human development (pp 65-129) New York Cambridge University Press

Elbow, P (1994) Teaching two kinds of thinking by teaching writing In K S Walter (Ed), Re-thinking reason New perspectives in critical thinking (pp 25-31) New York State University of New York Press, Albany

Facione, P A & Facione, N C (1992) The California Critical Thinking Disposition Inventory (CCTDI) Test administration manual Millbrae, CA California Academic Press

Facione, N C , Facione, P A , & Sanchez, C A (1994) Critical thinking disposition as a measure of competent clinical judgment The development of the California Critical Thinking Disposition Inventory Journal of Nursing Education, 33 (8), 345-350

Facione, P A , Facione, N C , & Giancarlo, C A (1996) The motivation to think in working and learning New Directions For Higher Education, 96, 67-79

Feldman, E (1985) Medical ethics the Japanese way Hastings Center Report, 15 (5), 21-24

Fosnot, C T (1996) Constructivism A psychological theory of learning In C T Fosnot (Ed), Constructivism Theory, perspectives, and practice (pp 8-33) New York Teachers College, Columbia University

Gardner, P & Johnson, S (1996) Thinking critically about critical thinking an unskilled inquiry into Quinn and McPeck Journal of Philosophy of Education, 30 (3), 441-456

Halpern, D. F. (1993). Assessing the effectiveness of critical thinking instruction. The Journal of General Education, 42 (4), 238-254.

Ikegami, N. (1991). Japanese health care: low cost through regulated fees. Health Affair, 10, 87-109.

Kakai, H. (1997). Developing culturally synergistic approach to medical decision making with elderly cancer patients in Japan and the United States through education. Paper presented at the Asian Studies on the Pacific Coast '97 (ASPAC), Pacific Grove, CA.

Kato, I. (1989). Ho to seimei rinri kara mita setsumei to doi ["Setsumei to doi" or informed consent from a legal and bioethical point of view]. Report presented at the Bioethics Council of the Japanese Medical Association on issues of "setsumei to doi". Nippon Ishikai Zasshi, 102 (2), 160-168. (In Japanese)

Lazu, V. B. & Helbing, C. (1991). Medicare short-stay hospital services by diagnosis-related groups. Health Care Financing Review, 12 (3), 105-140.

Laubscher, M. R. (1994). Encounters with difference: Student perceptions of the role of out-of-class experiences in education abroad. Westport, Connecticut: Greenwood Press.

Lipman, M. (1991). Thinking in education. New York: Cambridge University Press.

Long, S. O. & Long, B. D. (1982). Curable cancers and fatal ulcers: Attitudes toward cancer in Japan. Social Science and Medicine, 16, 2101-2108.

McCarthy, C. L. (1986). What is 'critical thinking'? Is it generalizable? Educational Theory, 36 (2), 217-239.

McMillan, J. H. (1987). Enhancing college students' critical thinking: A review of studies. Research in Higher Education, 26 (1), 3-29.

McPeck, J. E. (1981). Critical thinking and education. Oxford: Martin Robertson.

National Institute of Education (1984). Involvement in learning: Realizing the potential of American higher education. Washington, D.C.: U.S. Government Printing Office.

Novack, D.H., Plumer, R., Smith, R.L., Ochitill, H., Morrow, G.R., and Bennett, J.M. (1979). Changes in physicians' attitudes toward telling the cancer patient. The Journal of the American Medical Association, 241 (9), 897-900.

Pascarella, E. T. (1989). The development of critical thinking: Does college make a difference? Journal of College Student Development, 30, 19-26.

Pascarella, E. T., Bohr, L., Nora, A., & Terenzini, P. T. (1996). Is differential exposure to college linked to the development of critical thinking? Research in Higher Education, 37 (2), 159-174.

Paul, R. (1990). Critical thinking: What every person needs to survive in a rapidly changing world. Rohnert Park, CA: Center for Critical Thinking and Moral Critique, Sonoma State University.

Paul, R. (1994). Teaching critical thinking in the strong sense: A focus on self-deception, world views, and a dialectical mode of analysis. In K. S. Walter (Ed.), Re-thinking reason: New perspectives in critical thinking. (pp. 181-198). New York: State University of New York Press, Albany.

Pressley, M. with McCormick, C. B. (1995). Cognition, teaching, and assessment. New York, NY: Harper Collins College Publishers.

Tanida, N. (1994). Japanese attitudes towards truth disclosure in cancer. Scandinavian Journal of Social Medicine, 22 (1), 50-57.

Walter, K. S. (1994). Introduction: Beyond logicism in critical thinking. In K. S. Walter (Ed.), Re-thinking reason: New perspectives in critical thinking. (pp. 1-22). New York: State University of New York Press, Albany.

Figure 1

Disclosure vs. Concealment of the Terminal Cancer Diagnosis